

5 The objects are connected into a hierarchy whose structure explicates interactions among the resources and subtasks. When a fault is detected, the structure tells the debugger everything the program was doing at the time of the fault and lays open the developmental history of the program that led to the fault. The debugger uses this information to trace the detected fault back through code and time to its origin. When a
10 new feature is added, the structure tells maintenance personnel how the new feature affects existing functions. Within the structure, the invention provides mechanisms for handling reference counters and software locks. Groups of resources can be handled together, the structure taking care of coordination.